



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/504,896	02/16/2000	Michel Piche	6013-63US-JA	6548

20988 7590 10/24/2002  
OGILVY RENAULT  
1981 MCGILL COLLEGE AVENUE  
SUITE 1600  
MONTREAL, QC H3A2Y3  
CANADA

EXAMINER

RODRIGUEZ, ARMANDO

ART UNIT PAPER NUMBER

2828

DATE MAILED: 10/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/504,896

Applicant(s)

PICHE ET AL.

Examiner

Armando Rodriguez

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10,12,13,15 and 16 is/are rejected.
- 7) ☒ Claim(s) 11,14 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.



PAUL IP

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10,12,13,15,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loh et al (PN 5,172,382) in view of Spence et al (Optics Letter vol. 16, no. 1 January 1, 1991).

Regarding claims 1-10,12,13,15,16.

Loh et al illustrates in figure 6 a passive self-modulated laser system having a laser diode and counter-propagating laser beams emitting from the front and back facet of the laser diode. In column 9 lines 5-10 disclose that the polarization modes can be selected by adjusting the cavity mirrors (misalignment or realignment).

Loh et al is silent as to achieving mode-locking of the laser system by mirror adjustments.

Spence et al teaches in page 43 column 1 of inducing self-mode locking of the laser system by realigning the end mirrors.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to interpret the teachings of Spence et al to provide mode locking in the laser system of Loh et al because Loh et al selects the modes and obtains self modulation by mirror adjustments.

Regarding claims 5-7.

Laser diodes are well known to produce dual wavelengths from the back and front facets, as shown in Loh et al.

***Allowable Subject Matter***

Claims 11,14,17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

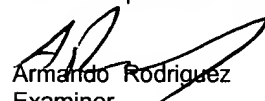
Regarding claims 11,14,17, none of the prior arts of record discloses a semiconductor laser having the step of misaligning the mirror to favor amplification of a wavelength shorter than the center wavelength.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Armando Rodriguez whose telephone number is (703) 308-6218. The examiner can normally be reached on 10-hour day / M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-4881.

  
Armando Rodriguez  
Examiner  
Art Unit 2828

  
Paul Ip  
Supervisor  
Art Unit 2828

AR/PI  
October 21, 2002